Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for dynamically allocating link bandwidth on Resilient Packet Ring, which is based on fairness bandwidth calculation per advertisement interval, characterized in that, the method comprises the following steps in one advertisement interval:

a. measuring a group of variables;

b. calculating a local fair rate using the measured variables;

c. determining the advertising rate based on the local fair rate and the advertising rate provided by a downstream node;

d. each node on a resilient packet ring determines the advertising rate by Step c, and transmits data packets with the advertising rate.

2. (Original) The method for dynamically allocating link bandwidth on Resilient Packet Ring according to claim 1, characterized in that, the group of variables in Step a are:

a1. add_rate: This is the byte count for local packets added onto the ring by the node for the fairness eligible packets,

a2. total_add_rate: This is the total byte count for local packets added onto the ring by the node,

a3. fw_rate: This is the byte count for transit packets on the ring for the fairness eligible packets,

a4. total_fw_rate: This is the total byte count for transit packets on the ring.

3. (Currently amended) The method for dynamically allocating link bandwidth on Resilient Packet Ring according to claim 1, characterized in that, Step b comprises the following further steps:

b1. calculate an idle rate with the equation:

idle_rate=link_rate-total_add_rate-total_fw_rate,

where link_rate is the byte count in one advertisement interval at full link rate;

b2. if idle_rate is less than idle_rate_threshold, where the idle_rate_threshold could be set to 0.01 or even lower:

$acc_idle=(\alpha-1)*$açc_idle$/\alpha$

otherwise,

$acc\_idle=acc\_idle+idle\_rate/\beta$

$acc\_idle=\min(acc\_idle,unreserved\_rate)$

where acc_idle is basically the integral of the idle rate, and its value is no more than the unreserved rate;

b3. calculate the local fair rate with the formula:

~~local_fair_rate=(δ-1)*local_rate/δ+add_rate(δ*weight)+acc_idle/δ,~~

local_fair_rate=(δ-1)*local_fair_rate/δ+add_rate(δ*weight)+acc_idle/δ,

where *Weight* is the station weight for weighted fairness algorithm.

4. (Original) The method for dynamically allocating link bandwidth on Resilient Packet Ring according to claim 1, characterized in that, Step c comprises the following further steps:

c1. if the received advertising rate is less than the local fair rate, the advertising_rate is set to the value of the received advertising rate;

c2.if fw_rate is less than local_fair_rate, the advertising_rate is set to the local_fair_rate;

c3. if add_rate is more than minimum packet size or there are packets in the low priority queue to be transmitted, the advertising_rate is set to the local_fair_rate;

c4. otherwise, the advertising_rate is set to the received advertising rate.

5. (Original) The method for dynamically allocating link bandwidth on Resilient Packet Ring according to claim 1, characterized in that, Step d means that:

each node on the resilient packet ring determines the advertising rate by Step c, and transmits data packets with the advertising rate, ensures the fair bandwidth allocation to the nodes on the resilient packet ring.